

CLAIMS

1. A method for producing a soil improving material derived from marine resources, wherein the soil improving material comprises calcium carbonate existing separately from organic matrix, comprising the steps of:

burning marine resources, under burning conditions for degrading the organic matrix to such an extent that calcium carbonate may be separated from the organic matrix, said marine resources comprising calcium carbonate and organic matrix enclosing calcium carbonate as main components, and

pulverizing the burnt material obtained in said burning step to separate calcium carbonate therein.

2. The method for producing a soil improving material derived from marine resources according to claim 1, characterized in that said marine resources are shells of scallops, oysters, corbiculas and the like shellfish.

3. The method for producing a soil improving material derived from marine resources according to claim 1 or 2, characterized in that said burning step is carried out under burning conditions for carbonizing said organic matrix, and in the burning step, a burnt material, which consists of undegraded calcium carbonate and carbonized organic matrix, may be obtained.

4. The method for producing a soil improving material derived from marine resources according to claim 3, characterized in that said burning conditions comprises a burning temperature from 560°C to 740°C, and a burning time from 3 minutes to 25 minutes.

5. The method for producing a soil improving material derived from marine resources according to claim 3, characterized in that said burning conditions comprises a burning temperature from 600°C to 700°C, and a burning time from 5 minutes to 20 minutes.

6. The method for producing the soil improving material derived from marine resources according to claim 1 or 2, characterized in that said burning step is carried out under burning conditions for ashing said organic matrix, and in the burning step, a burnt material, which consists of undegraded calcium carbonate and ashed organic matrix, may be obtained.

7. The method for producing a soil improving material derived from marine resources according to claim 6, characterized in that said burning conditions comprises a burning temperature from 720°C to 900°C, and a burning time from 25 minutes to 45 minutes.

8. The method for producing a soil improving material derived from marine resources according to claim 6, characterized in that the burning conditions comprises a burning temperature from 750°C to 850°C, and a burning time from 25 minutes to 45 minutes.

9. The method for producing a soil improving material derived from marine resources according to claim 6, characterized in that said burning conditions comprises a burning temperature from 770°C to 830°C, and a burning time from 25 minutes to 45 minutes.

10. The method for producing a soil improving material derived from marine resources according to any of claims 6 to 9, characterized in that said burning step comprises use of a fuel and a furnace which are together capable of degrading calcium oxide generated in the step.

11. The method for producing a soil improving material derived from marine resources according to claim 10, characterized in that said fuel is natural gas and said furnace is a radiant heat furnace.

12. The method for producing a soil improving material derived from marine resources according to any of claims 1 to 11, characterized in that said pulverizing step comprises crushing the burnt material mechanically and

passing said resultant crashed material through a wire sieve of mesh size from 60 (250 μm) to 80 (177 μm).

13. A soil improving material derived from marine resources, characterized in that the soil improving material is produced by burning a raw material, and contains calcium carbonate of 98% by weight or more and alkali content from 50% to 60%, wherein said raw material is shells of scallops, oysters, corbiculas or the like shellfish containing calcium carbonate and organic matrix enclosing calcium carbonate as main components.

14. A soil improving material derived from marine resources produced by the method according to any of claims 2 to 12, characterized in that the soil improving material contains calcium carbonate 98% by weight or more and alkali content from 50% to 60%.

15. A soil improving material derived from marine resources, which is produced by burning a raw material of shells of scallops, oysters, corbiculas and the like shellfish containing calcium carbonate and organic matrix enclosing calcium carbonate as main components, characterized in that particles with a diameter of 250 μm or less represents 90 to 100% by weight of the total weight.

16. A soil improving material derived from marine resources produced by the method according to any of claims 2 to 12, characterized in that particles with a diameter of 250 μm or less represents 90 to 100% by weight of the total weight.